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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/781,626	02/20/2004	Florence Leplingard	Q79815	4116
23373	7590	02/17/2006	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			NGUYEN, TUAN N	
			ART UNIT	PAPER NUMBER
			2828	

DATE MAILED: 02/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/781,626

Applicant(s)

LEPLINGARD ET AL.

Examiner

Tuan N. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>02/20/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 102

1. The following is a quotation of 35 U.S.C. 102(b) which forms the basis for all obviousness rejections set forth in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 7, 8, 10 are rejected under 35 U.S.C. 102(a) as being unpatentable D'Amato et al. (US 5,511,083).

With respect to claim 1, D'Amato et al. ' 083 discloses and shows a Raman laser device having a first cavity in which lasing occurs at a first frequency, and at least one second cavity in which lasing occurs at a second frequency, thereby generating respective first and second waves inside the respective cavities having a first power and a second power, respectively (*Fig 1: first wavelength from #24 & #50 and a second wavelength from #36 #44 in first and second cavity*)(*Column 2 line 40-50 optical waveguide with grating producing first polarization and second polarization*), generating beams propagating outside the cavities by coupling out a part of the first power and a part of the second power utilizing respective output mirrors (*Col 8: 1-15 output of first and second power from angle grating 212 out of the fiber 208 as indicated by lines 214, 216 as shown in figures 2: 28, 46 or figure 3: 214, 216*) , attenuating the part of the second power that is coupled out without attenuating the complementary part of the second power remaining in the second cavity, wherein the part of the second power that is coupled out is attenuated utilizing at least one Fiber Bragg Grating (*Col 4: 55-67 discloses the main output laser light exits 98% of the cavity , other percent reflectivities stay in the cavity or may be used if desired, where the second power is coupled out utilizing at least one fiber bragg grating #14,*

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16)(Fig 1:16, 40)

With respect to claim 2, D'Amato et al. ' 083 teaches the at least one Fiber Bragg Grating has a reflectivity that is higher than the reflectivity where highest output power is obtained (Col 4: 65-67, Col 5: 4 discloses the light within the cavity is greater than or equal, by setting the amount of gain, length of cavity and the reflectivity of the grating).

With respect to claim 3, Fig 1: 26 shows at least one Fiber Bragg Grating is a slanted Fiber Bragg Grating.

With respect to claims 7, 8 D'Amato et al. ' 083 part of the second power that is coupled out is attenuated by a slanted Fiber Bragg Grating that is located spatially apart from the output mirror (Fig 1: #46 second power attenuated by slanted Fiber Bragg Grating is apart from the output Fiber Bragg Grating mirror # 16).

With respect to claim 10, wherein the part of the second power that is coupled out is attenuated by a superposition of two a slanted Fiber Bragg Gratings and a standard FBG (Fig 1: #16 standard FBG and #26 slanted Fiber Bragg Gratings).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

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such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or non-obviousness.
4. Claims 4-6, 9 are rejected under 35 U.S.C. 103(a) as being unpatentable D'Amato et al. (US 5,511,083) in view of Putnam et al. (US 6,594,288)

With respect to claims 4, 5 D'Amato et al. '083 discloses the above. The claim further requires the slanted Fiber Bragg Grating's attenuation is adjustable. Putnam et al. '288 teaches a tunable Raman laser by stresses the first and second optical waveguide to change the reflective wavelengths (Col 2: 25-35). It would have been obvious to one of ordinary skill in the art to provide D'Amato et al. '083 with the tunable stress controller as taught or suggested by Putnam et al. '288, for the benefit of tunable over an extended wavelength range with the slant grating (Col 2: 2-4). Which also been taught by D'Amato et al. '083 (Col 4: 65-67, Col 5: 4 discloses the light within the cavity is greater than or equal, by setting the amount of gain, length of cavity and the reflectivity of the grating).

With respect to claim 6, Putnam et al. '288 shows comprising a control device that adjusts the Fiber Bragg Grating's reflectivity (Fig 2: 48 the controller adjusting the fiber grating

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#44, #42).

With respect to claim 9, D'Amato et al. ' 083 shows both the Fiber Bragg Grating serving as an output mirror (Fig 1: #26 slant grating output wavelength #26, #28, while Fiber Bragg Grating fiber output wavelength #40), and the slanted Fiber Bragg Grating Fiber are adjustable which has been taught by D'Amato et al. ' 083 (Col 4: 65-67, Col 5: 4 discloses the light within the cavity is greater than or equal, by setting the amount of gain, length of cavity and the reflectivity of the grating) or suggested by Putnam et al. '288, for the benefit of tunable over an extended wavelength range with the slant grating (Col 2: 2-4).

Communication Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan N Nguyen whose telephone number is (571) 272-1948. The examiner can normally be reached on M-F: 7:30 - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harvey Minsun can be reached on (571) 272-1835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Tuan N. Nguyen

Tuan Nguyen

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